## CONTENTS

Volume 31, Issue Nos 1-12 (2002)

# EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS

Issue No. 1, JANUARY

Optimal placement of sensors on buildings subjected to intermediate-storey excitation according to QN control method: L. Xing, E. Tachibana and Y. Inoue	1
Response of unbounded soil in scaled boundary finite-element method: J. P. Wolf $\dots$	15
Approximate analysis methods for asymmetric plan base-isolated buildings: K. L. Ryan and A. K. Chopra	33
Response to three-component seismic motion of arbitrary direction: J. J. Hernández and O. A. López	55
Seismic behaviour of multistorey RC wall-frame system versus bare ductile frame system: Y. Lu	79
A strength distribution criterion for minimizing torsional response of asymmetric wall-type systems: B Myslimaj and W. K. Tso	99
Time-delay effect and compensation on direct output feedback controlled mass damper systems: S. Y. Chu, T. T. Soong, C. C. Lin and Y. Z. Chen	121
Effects of wave passage on the relevant dynamic properties of structures with flexible foundation: J. Avilés, M. Suárez and F. J. Sánchez-Sesma	139
Active interaction control of civil structures. Part 1: SDOF systems: Y. Zhang and W. D. Iwan	161
Active interaction control of civil structures. Part 2: MDOF systems: Y. Zhang and W. D. Iwan	179
Issue No. 2, FEBRUARY	
Cyclic analysis and capacity prediction of concrete-filled steel box columns: K. A. S. Susantha, H. Ge and T. Usami	195
Structural damage detection using the optimal weights of the approximating artificial neural networks: SL. Hung and C. Y. Kao	217
Closed-form solution for seismic response of adjacent buildings with linear quadratic Gaussian controllers: Y. L. Xu and W. S. Zhang	235

Indexed or abstracted by American Geological Institute; Applied Mechanics Reviews; Applied Science & Technology Abstracts (H. W. Wilson); Cambridge Scientific Abstracts; Current Contents® Engineering, Computing & Technology (ISI); Earthquake Engineering Abstracts (NISEE); Ei COMPENDEX PLUS; Ei Page One; Environment Abstracts (CIS); Fluidex (Elsevier); GeoArchive (Geosystems); Geobase (Elsevier); Geological Abstracts (Elsevier); GeoSEARCH (Geosystems); Geotechnical Abstracts (Geotext Services); Geotitles: Geoarchaeology (Geosystems); Groundwater & Soil Contamination Database; Indian Society of Earthquake Technology Bulletin; International Bibliographies of Periodical Literature (IBR & IBZ); International Civil Engineering Abstracts (Anbar); International Petroleum Abstracts; ISI Alerting Services; Mechanics; Science Citation Index Expanded (also known as SciSearch®) (ISI); Science Citation Index® (ISI); Shock & Vibration Digest (Sage).

Applicability of the H/V spectral ratio of microtremors in assessing site effects on seismic motion: V. H. S. Rodriguez and S. Midorikawa	261
Seismic response of rail-counterweight systems in elevators: M. P. Singh, L. E. Suarez and Rildova	281
Analytical model of structures with frictional pendulum isolators: J. L. Almazán and J. C. De la Llera	305
Extraction of hysteretic properties of seismically isolated bridges from quick-release field tests: Q. Chen, B. M. Douglas, E. A. Maragakis and I. G. Buckle	333
Effect of masonry infills on seismic performance of a 3-story R/C frame with non-seismic detailing: HS. Lee and SW. Woo	353
Application of wavelet theory to identify yielding in seismic response of bi-linear structures: TC. Pan and C. L. Lee	379
Functional series TARMA modelling and simulation of earthquake ground motion: G. N. Fouskitakis and S. D. Fassois	399
Experimental and analytical studies on the performance of hybrid isolation systems: SP. Chang, N. Makris, A. S. Whittaker and A. C. T. Thompson	421
Performance-based design with semi-active structural control technique: N. Kurata, T. Kobori and N. Koshika	445
Test on low-ductility RC frames under high- and low-frequency excitations: ST. Quek, C. Bian, X. Lu, W. Lu and H. Xiong	459
SHORT COMMUNICATIONS Continuous ambient-vibration monitoring of the arch dam of Mauvoisin: G. R. Darbre and J. Proulx	475
Critical damping of structures with elastically supported visco-elastic dampers: Y. Lee, I. Takewaki, K. Uetani and K. Inoue	481
Issue No. 3, MARCH	
Special Topics Issue on	
Performance-based Earthquake Engineering	
Foreword	487
Incremental dynamic analysis: D. Vamvatsikos and C. A. Cornell	491
Inelastic deformation response of SDOF systems subjected to earthquakes: R. Riddell, J. E. Garcia and E. Garces	515
Evaluation of approximate method to estimate maximum inelastic displacement demands: E. Miranda and J. Ruiz-García	539
A modal pushover analysis procedure for estimating seismic demands for buildings:  A. K. Chopra and R. K. Goel	561

#### VOLUME CONTENTS

V

## Issue No. 4, APRIL

Multiple-tuned liquid column dampers for torsional vibration control of structures: experimental investigation: K. M. Shum and Y. L. Xu	977
Simulations of non-stationary frequency content and its importance to seismic assessment of structures: J. Wang, L. Fan, S. Qian and J. Zhou	993
Probabilistic approach for modal identification using non-stationary noisy response measurements only: KV. Yuen, J. L. Beck and L. S. Katafygiotis	1007
DISCUSSION OF PAPER Response spectrum of incompatible acceleration, velocity and displacement histories by Praveen K. Malhotra, <i>Earthquake Engng Struct. Dyn.</i> 2001; <b>30</b> (2):279–286: G. Mylonakis and C. Syngros	1025
Author's Reply: P. K. Malhotra	1033
DISCUSSION OF PAPER Tuned liquid dampers for controlling earthquake response of structures by P. Banerji et al., Earthquake Engng Struct. Dyn. 2000; 29(5): 587–602: S. K. Yalla and A. Kareem	1037
Issue No. 5, MAY	
Active multiple tuned mass dampers for structures under the ground acceleration:  C. Li and Y. Liu	1041
Damage identification of structures with uncertain frequency and mode shape data: Y. Xia, H. Hao, J. M. W. Brownjohn and PQ. Xia	1053
Comparative response analysis of conventional and innovative seismic protection strategies: S. Bruno and C. Valente	1067
A base isolation system for bridges subjected to seismic disturbances: H. Kaplan and A. Seireg	1093
Parameter identification of inelastic structures under dynamic loads: H. Zhang, G. C. Foliente, Y. Yang and F. Ma	1113
Seismic response of self-centring hysteretic SDOF systems: C. Christopoulos, A. Filiatrault and B. Folz	1131
Design energy input spectra for moderate-seismicity regions: A. Benavent-Climent, L. G. Pujades and F. López-Almansa	1151
Wavelet-based characterization of design ground motions: S. Mukherjee and V. K. Gupta	1173
Correlation of JMA instrumental seismic intensity with strong motion parameters: K. R. Karim and F. Yamazaki	1191
	1213

#### Issue No. 6, JUNE

## Issue No. 7, JULY

Discrete-time variable structure control method for seismic-excited building

### Issue No. 8, AUGUST

A recursive decomposition algorithm for network seismic reliability evaluation: J. Li and J. He	1525
A response-based decoupling criterion for multiply-supported secondary systems: S. R. Chaudhuri and V. K. Gupta	1541
Pseudodynamic tests on rubber base isolators with numerical substructuring of the superstructure and strain-rate effect compensation: F. J. Molina, G. Verzeletti, G. Magonette, Ph. Buchet, V. Renda, M. Geradin, A. Parducci, M. Mezzi, A. Pacchiarotti, L. Federici and S. Mascelloni	1563
Effect of boundary element details on the seismic deformation capacity of structural walls: YH. Oh, S. W. Han and LH. Lee	1583
Mode-acceleration approach to seismic response of multiply-supported secondary systems: V. S. Chandra Rao, S. R. Chaudhuri and V. K. Gupta	1603
Issue No. 9, SEPTEMBER	
Earthquake response of elastic SDF systems with non-linear fluid viscous dampers: WH. Lin and A. K. Chopra	1623
Plasticity-fibre model for steel triangular plate energy dissipating devices: CC. Chou and KC. Tsai	1643
Damaging properties of ground motions and prediction of maximum response of structures based on momentary energy response: N. Hori and N. Inoue	1657
Experimental investigation of the earthquake response of a model of a marble classical column: H. P. Mouzakis, I. N. Psycharis, D. Y. Papastamatiou, P. G. Carydis, C. Papantonopoulos and C. Zambas	1681
Numerical prediction of the earthquake response of classical columns using the distinct element method: C. Papantonopoulos, I. N. Psycharis, D. Y. Papastamatiou, J. V. Lemos and H. P. Mouzakis	1699
Probabilistic analysis of peak response of MDOF systems with uncertain PSD function: H. P. Hong and S. S. Wang	1719
Active viscous damping system with amplifying braces for control of MDOF structures: J. Gluck and Y. Ribakov	1735
DISCUSSION OF PAPER  Evaluation of combination rules for maximum response calculation in multi- component seismic analysis by O. A. López, A. K. Chopra and J. J. Hernández, Earthquake Engng Struct. Dyn. 2001; 30(9):1379–1398: S. A. Anagnostopoulos	1753
Authors' Reply: O. A. López, A. K. Chopra and J. J. Hernández	1755

#### Issue No. 10, OCTOBER

### Issue No. 11, NOVEMBER

Modelling three-dimensional non-linear seismic performance of elevated bridges with emphasis on pounding of girders: P. Zhu, M. Abe and Y. Fujino ..... Seismic response analysis on the stability of running vehicles: Y. Maruyama and F. Yamazaki ..... 1915 Kinematic response functions and dynamic stiffnesses of bridge embankments: J. Zhang and N. Makris..... 1933 Seismic response analysis of highway overcrossings including soil-structure interaction: J. Zhang and N. Makris..... 1967 Cyclic shear behaviour of steel box girders: experiment and analysis: P. Chusilp, T. Usami, H. Ge, H. Maeno and T. Aoki..... 1993 SHORT COMMUNICATION Traffic-induced variability in dynamic properties of cable-stayed bridge: Q. W. Zhang,

### Issue No. 12, DECEMBER

Probabilistic seismic demand analysis of controlled steel moment-resisting frame structures: L. R. Barroso and S. Winterstein	2049
An experimental evaluation of ice cover effects on the dynamic behaviour of a concrete gravity dam: P. Paultre, J. Proulx and C. Carbonneau	2067
Two-dimensional modelling of ice cover effects for the dynamic analysis of concrete gravity dams: N. Bouaanani, P. Paultre and J. Proulx	2083
Ground-shaking mapping for a scenario earthquake considering effects of geological conditions: a case study for the 1995 Hyogo-ken Nanbu, Japan earthquake: K. Fujimoto and S. Midorikawa	2103
Multiobjective optimal FLC driven hybrid mass damper system for torsionally coupled, seismically excited structures: A. S. Ahlawat and A. Ramaswamy	2121
SHORT COMMUNICATION Experimental analysis of seismic torsional ground motion recorded by the LSST-Lotung array: N. Laouami and P. Labbe	2141
AUTHOR INDEX	2149
KEY WORD INDEX	2151

